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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-------------------------|------------------|
| 10/041,598 | 01/10/2002 | Kei Yasuna | 500.41053X00 | 5100 |
| 20457 7590 04/20/2004 ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-9889 | | | EXAMINER | |
| | | | OLSON, JASON C | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2651 | <i>f: f</i> |
| | | | DATE MAILED: 04/20/2004 | 4 |

Please find below and/or attached an Office communication concerning this application or proceeding.

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| | Application No. | Applicant(s) |
| Office Action Summers | 10/041,598 | YASUNA ET AL. |
| Office Action Summary | Examiner | Art Unit |
| | Jason C Olson | 2651 |
| The MAILING DATE of this communication app Period for Reply | pears on the cover sheet with the | correspondence address |
| A SHORTENED STATUTORY PERIOD FOR REPL THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.1 after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a rep - If NO period for reply is specified above, the maximum statutory period - Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailin earned patent term adjustment. See 37 CFR 1.704(b). | 136(a). In no event, however, may a reply be by within the statutory minimum of thirty (30) d will apply and will expire SIX (6) MONTHS fro e, cause the application to become ABANDON | timely filed ays will be considered timely, m the mailing date of this communication. IED (35 U.S.C. § 133). |
| Status | | |
| 1)⊠ Responsive to communication(s) filed on 10 J 2a)□ This action is FINAL. 2b)⊠ This 3)□ Since this application is in condition for allowated closed in accordance with the practice under the condition of the cond | s action is non-final. ance except for formal matters, p | |
| Disposition of Claims | | |
| 4) Claim(s) 1-7 is/are pending in the application. 4a) Of the above claim(s) is/are withdra 5) Claim(s) 7 is/are allowed. 6) Claim(s) 1-3,5 and 6 is/are rejected. 7) Claim(s) 4 is/are objected to. 8) Claim(s) are subject to restriction and/or | awn from consideration. | |
| Application Papers | | |
| 9) The specification is objected to by the Examine 10) The drawing(s) filed on 10 November 2002 is/of Applicant may not request that any objection to the Replacement drawing sheet(s) including the correct 11) The oath or declaration is objected to by the E | are: a) \boxtimes accepted or b) \square objection is required if the drawing(s) be held in abeyance. So the cition is required if the drawing(s) is α | see 37 CFR 1.85(a). objected to. See 37 CFR 1.121(d). |
| Priority under 35 U.S.C. § 119 | | |
| 12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of: 1. Certified copies of the priority documen 2. Certified copies of the priority documen 3. Copies of the certified copies of the priority application from the International Burea * See the attached detailed Office action for a list. | nts have been received. Its have been received in Applicate the control of the co | ation No ved in this National Stage |
| Attachment(s) 1) Notice of References Cited (PTO-892) | 4) 🔲 Interview Summa | iry (PTO-413) |
| 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08 Paper No(s)/Mail Date 3. | Paper No(s)/Mail | |

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DETAILED ACTION

Claim Objections

Claims 1, 5, and 7 recite the limitation "the magnetic head". There is insufficient antecedent basis for this limitation in the claim. The Examiner suggests that "the magnetic head" be replaced with "the magnetic disk". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 and 5-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Belser (U.S. 6,643,082).

Regarding claim 1, Belser teaches a hard disk drive assembly that includes a magnetic recording disk (see col. 8, line 8-10) for storing magnetically written data; a head to read data from and write data to the disk; the head is attached to an arm, which in combination with an actuator moves the head over the disk (see col. 5, line 1-22); to initialize a disk, the read and write heads are moved to an inner diameter (ID) of the disk surface against a crash stop (or stopper) and current is applied to the actuator arm motor to compress (or elastically deform) the crash stop and servo pattern timing marks are read to measure the time and distance reader to

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writer offset (or positional dependent characteristic) (see col. 8, line 32-62; The crash stop has to be formed by an elastic member for the actuator to be able to compress it.).

Regarding claims 2, while the actuator is depressed against the inner diameter crash stop, the head reads a servo pattern in order to measure the time and distance reader to writer offset (see col. 8, line 32-62).

Regarding claim 3, the head is moved along one direction while the disk is being initialized (see col. 8, line 37-62).

Regarding claims 5-6: Method claims (5-6) are drawn to the method of using the corresponding apparatus claimed in claims (1-3). Therefore method claims (5-6) correspond to apparatus claims (1-3) and are rejected for the same reasons of anticipation as used above.

Allowable Subject Matter

Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 7 is allowed. The prior art fails to teach alone or in combination a servo signal recording method where an elastic deformation amount of the stopper is changed by varying force of driving the actuator under such a condition that the actuator is depressed against the stopper so as to change a position of the head in a stepwise mode and to record patterns having finite lengths which are not overlapped with each other at a plurality of radial positions.

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Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. Baker et al. (U.S. 6,704,156) is cited for self-writing of servo patterns in a disk drive.

Cunningham et al. (U.S. 6,005,742) is cited for controlling a multi-stage actuator in a disk drive.

Brown et al. (U.S. 6,040,955) is cited for self-servo writing. Smith et al. (U.S. 5,838,514) is cited

for calibrating a thermal response of a magnetoresistive transducer. Yarmchuk (U.S. 6,344,942)

is cited for absolute track spacing determination for self-servo writing.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jason C Olson whose telephone number is 703.305.8325. The

examiner can normally be reached on Monday thru Thursday 7:30-5:30; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David R Hudspeth can be reached on (703)308-4825. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

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March 8th, 2004

DAVID HUDSPETH SUPERVISORY PATENT EXAMINED

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